



Exeter Student Investment Fund

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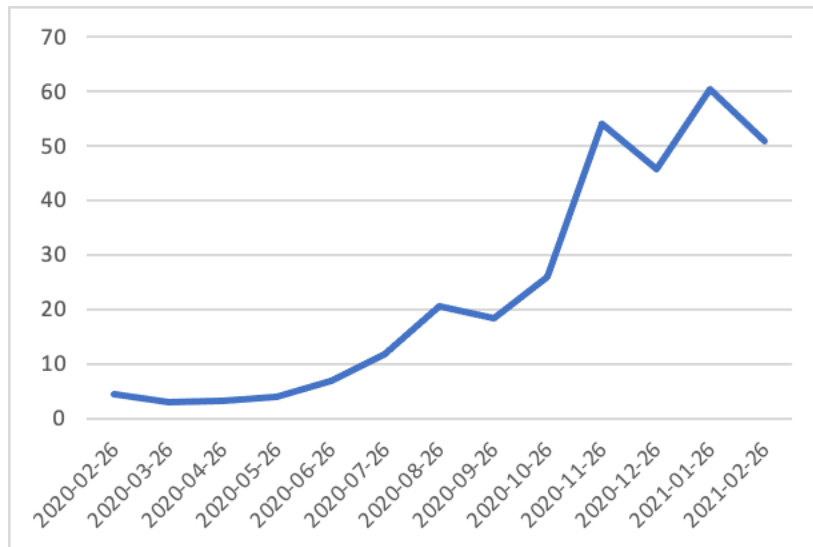
Nio, Inc. [NIO]

Audrey Pallar & Cameron Swatton

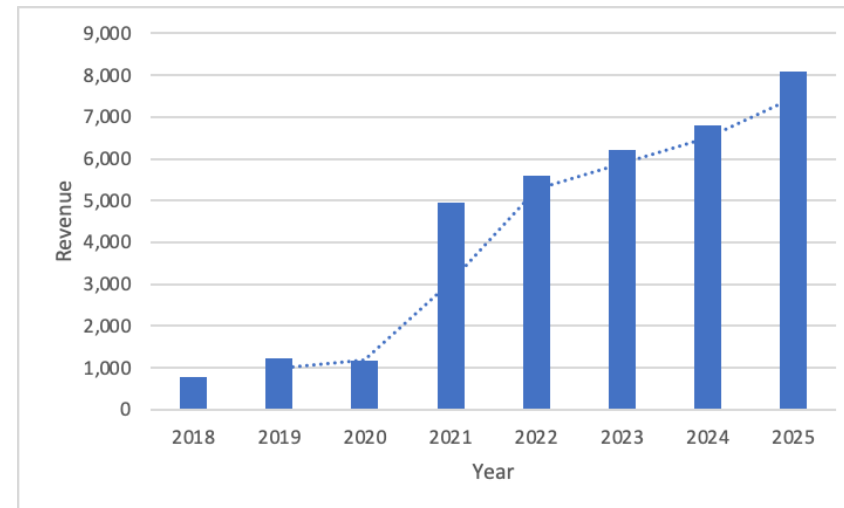
Recommendation



Technology, Media and Telecoms	
NIO - NASDAQ	Tuesday 2 March 2021
Stock Rating	BUY
Implied Share Price	\$36.36
Upside/Downside (%)	+837.11%
Share Price (24/2/20)	\$3.88
52-Week Range	\$2.11 - \$66.99
Shares Outstanding	1,560,000,000
Share Price	



Statistics & Valuation	
Terminal Growth	2.50%
WACC (%)	16.22%
DCF Analysis	
Equity Value	46,078
Shares Outstanding	1,560
Implied Share Price	\$29.54
Comparable Companies Analysis	
EV/EBITDA Multiple	45.6
NIO EBITDA (FY20)	-1540
Enterprise Value	68,615
Plus Cash and Cash Equivalents	873.2
Less: Preferred Stock and Minority Interest.	228.9
Less: Debt	1,900
Equity Value	67,359
Shares Outstanding	1,560
Implied Share Price	\$43.18





How it started:

- Founded in Nov 2014
- Introduced EP9 in 2016 as the world's fastest electric car
- First volume manufacture EV is ES8, launched in 2017

Aims:

- Provide premium service in the automobile industry
- The 'Blue Sky' guiding philosophy



Branches:

- Shanghai & Hefei → China HQs
- Beijing → R&D center for software
- San Jose → North American HQ
- Munich → Design center
- Oxford → R&D center for performance and advanced concepts



William Li - Founder & CEO

- Appointed in Jan 2018
- Bitauto Holdings Ltd.,
- Beijing Bituato E-Commerce & Beijing C&I Advertising



Li Hong Qin - Co-Founder, Director & President

- Appointed in Jan 2018
- Anhui Chery Automobile Sales & Services
- Roland Berger Strategy Consultants

Shareholders: Baillie Gifford & Co. (8.35%), BlackRock Fund Advisors (2.96%), Vanguard Group (2.56%), etc.



- Made-to-order – most EV companies
- Outsources car manufacturing to state-owned automaker in Hefei, Anhui
- Nio Power
 - Power Swap – swap batteries in 3 minutes
 - Power Charger – supports both plug-and-charge & scan-and-charge
 - Power Mobile – charge on the spot with a click in the app; 10-minute charge for 100km range



- BaaS (Battery as a Service)
 - Cars and batteries are purchased separately – more affordable
 - Battery subscription scheme
 - 500k swaps as of Nov 2020
- Network of “Power Swap” stations
 - Currently 180+ stations all over China
 - Potentially more attractive than EVs that need to be charged (often up to 8 hours from empty to full)
- Convenient and sophisticated interior – the “second living room” concept





- Tesla – biggest competition in China is Nio
 - Model Y SUV (RMB 339,900) and Model 3 sedans (RMB 249,900)
 - Stock performance – Current: \$742.02
- Xpeng & Li Auto – listed in NYSE
 - Stock performances respectively – up by 157% and 80% last 3 months from Jan 2021; compared to Nio at 110%
 - Jan 2021 sales respectively – 6,015 units (470% YOY growth) and 5,379 (355.8%); compared to Nio at 7,225 (352%)

Regulatory Backdrop



- China's national subsidy for EVs

- Tightened due to COVID-19
- Maximum price pre-subsidy: RMB 300k, except cars with battery-swapping feature, for RMB 16,200– 22,500 per unit subsidy
- Battery-swapping tech competition

- The Chinese market

- Car ownership lags compared to other developing countries: 173 for every 1,000 people
- Aims to have 25% of car sales be new energy vehicles by 2025 – an opportunity

Vehicle type	Technology	Year	Design parameters						Pre-subsidy vehicle price with tax included (CNY)
			ER ^[a] (km)	FS ^[1] (%)	SP (km/h)	BD (Wh/kg)	EC	CS (C-rate)	
Passenger car	BEV	2019	≥250		≥100	≥125	0 ^{[d][f]}		
		2020	≥300						
	PHEV	2019	≥50	>40 ^[b]			0 ^{[d][e][f]}		
		2020							300,000 ^[1]

Stock Performance



- NYSE:NIO
- Current (25th Feb): \$51.68
 - Surge by 1,110% since IPO in 2018
- High: \$52.07
- Market cap: \$81.57B
- Became the 4th most valuable automaker in the world in 2020





- New model: ET7
 - Nio's first sedan and autonomous model
 - Will have a range of 621 miles (or 1,000 km) with 150 kWh battery pack – battery power varies
 - Deliveries set on Q1 2022
- Europe expansion plans in 2021 – “Marco Polo”
 - Aims to sell 7k ES8 and ES6 SUVs in Europe in the first 2 years of entry
 - Plans to start with Copenhagen, Denmark – government aims to have 775k electric cars by 2030
- Delivery figures
 - Delivered 31,430 vehicles as of Oct 2020 – 111% YOY growth & double the same month in 2019
 - Delivered 7,225 vehicles in Jan 2021 – 352.1% growth YOY
 - It shows potential to grow further

Valuation – Comparable Company Analysis



- The comparable list includes:
 - BYD Motors
 - Ford Motors
 - Xpeng Motors
- There are many companies that provide a comparison to the electric vehicles that Nio produce.
- The aforementioned companies act as a similar comparison to Nio, so we'll be using them in the 'Comparable Companies Analysis'.
- It is important to note that relative valuations may be distorted due to price movements.

- The average EV/EBITDA multiple was 45.56x.
- This multiple is then applied to Nio's EBITDA (FY20) to arrive at the company's Enterprise Value. Enterprise Value plus 'Cash and Cash Equivalents' minus 'Preferred Stock and Minority Interest' and 'Total Debt' equals the Equity Value.
- This is then divided by the number of Shares Outstanding.

Comparable Companies	Share Price	Equity Value	Enterprise Value (EV)	Adjusted EBITDA	EV/EBITDA Multiple
BYD Motors	\$28.22	\$92,890,000,000	\$82,470,000,000	\$1,538,906,810	53.59
Ford Motors	\$11.62	\$46,230,000,000	\$178,920,000,000	\$7,666,000,000	23.34
Xpeng Motors	\$37.91	\$27,040,000,000	\$27,100,000,000	\$453,561,110	59.75
Average					45.56

Nio EBITDA (FY20)	-1539.84
EV/EBITDA Multiple	45.6
Enterprise Value (EV)	68,615
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Plus: Cash and Cash Equivalents	873.2
Less: Preferred Stock + Minority Interest	228.9
Less: Debt	1,900
Equity Value	67359.3
Shares Outstanding	1,560
Implied Share Price	43.18

Valuation – DCF

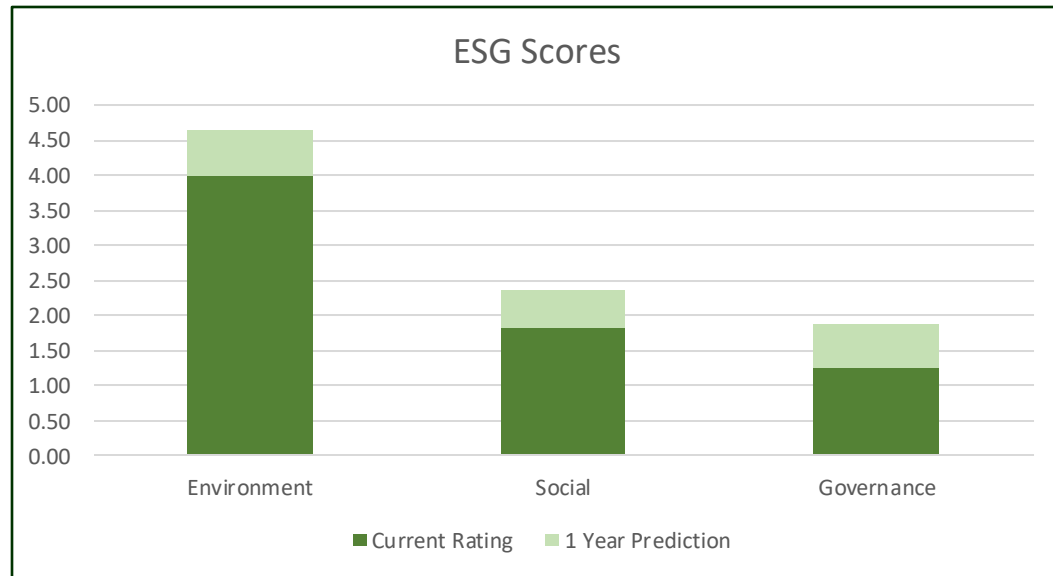


	Historical			Future					Terminal Value
	2018	2019	2020	2021	2022	2023	2024	2025	
DISCOUNTED CASH FLOW (USD MILLIONS)									
Free Cash Flow	-1,627.2	-1,607.6	-283.4	1,040	3,285	5,902.0	7,580	8,720.0	65,145
Total Cash Flow from Operating Activities	-1,219.7	-1,344.5	-10.2						
Capital Expenditure	-407.6	-263.1	-180.9						
Net Borrowings	0.0	0.0	92.3						
Time Period				1	2	3	4	5	
Discount Factor				1.1622	1.3507	1.5698	1.8244	2.1203	2.1203
PV of Future Cash Flow				894.85	2432.07	3759.71	4154.79	4112.63	30724.43
Required Return	16.22%								
Perpetual Growth Rate	2.50%								
Today's Value	46078.48								
Shares Outstanding	1,560								
Fair Value of Equity	29.54								
Weighted Average Cost of Capital									
S&P 500 Returns	10.00%								
Risk Free Rate (US 10Y Treasury Bond)	4.51%								
Levered Beta	2.79								
Cost of Equity	19.80%								
Cost of Debt	3.85%								
Effective Tax Rate	61.57%								
Cost of Debt (after-tax)	1.48%								
Shares Outstanding	1,560,000,000								
Share Price	54.42								
Market Capitalization	84,760,000,000								
Net debt	1,155,946,940								
Total Financing									
Proportion of Equity	80.48%								
Proportion of Debt	19.52%								
WACC	16.22%								



Environmental risks:

- **Low** as Nio is a company that specializes in producing electric vehicles which will help to reduce air pollution and is therefore beneficial to the environment.
- The new 'ET7' model marks the first application of Karuun renewable rattan on a production model → green material



Social risks:

- Data breaches
- NIO blocked the eight top investment banks that did its IPO from working for rivals by tying them up in rare year-long non-compete clauses, several people with direct knowledge of the matter said.

Governance risks:

- A Cayman Islands Company listed on the NYSE, so subject to NYSE corporate governance listing standards.
- However, NYSE rules permit a foreign investor to follow the corporate governance practices of its own country
- Certain corporate governance practices may differ significantly from the NYSE corporate governance listing standards.

Closing Summary



Implied Share Price		
Valuation		Weight
Comps	43.18	50%
DCF	29.54	50%
Final Share Price	\$ 36.36	

- Opportunities:
 - High-growth start-up
 - Innovative battery-swapping technology
 - Promising demand
- Risks:
 - Fierce competition
 - Potential lack of consumer interest for battery-swapping technology

Proposal: target buying price of \$36.36

